

5 **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): An airport lighting aid simulation generator, comprising:

a means for receiving ~~a plurality of navigation position and altitude signals;~~

10 a means for determining position and altitude information from the position and altitude signals;

a means for retrieving ~~airport runway position and direction~~ information from a database ~~of airport information as a function of one or more of the navigation of the position and altitude signals;~~

15 a means for determining a glide path as a function of the runway position and direction information retrieved from the database;

a means for determining deviation from ~~a the~~ glide path as a function of ~~one or more of~~ comparing the navigation signals position and altitude information with the glide path; and

a means for outputting a signal representative of the deviation from the glide path; ~~and~~

20 ~~a means for outputting a signal representative of a visual image for displaying the deviation.~~

Claim 2 (original): The generator of claim 1, further comprising a means for visually displaying the deviation from the glide path as a function of the deviation signal.

25 Claim 3 (original): The generator of claim 2 wherein the displaying means further comprises a means for displaying the deviation as a pattern of color coded indicators.

Claim 4 (previously presented): The generator of claim 2 wherein the displaying means further comprises means for displaying information as to a degree of deviation from the glide path as a visual image relative to the pattern of color coded indicators.

- 5 Claim 5 (currently amended): The generator of claim 1 wherein the means for determining ~~deviation from a glide path~~ further comprises means for generating the glide path as a combination of the runway position and direction with the position and altitude information.

10 Claim 6 (currently amended): The generator of claim 1 wherein the means for determining ~~deviation from a glide path~~ further comprises means for retrieving the glide path from the database.

Claim 7 (cancelled)

Claim 8 (currently amended): A simulated airport lighting aid generator, comprising:

- a an on-board processor structured to receive a plurality of navigation signals representative of a position and an altitude of a host aircraft;
- 15 a an on-board signal generator operated by the processor, the generator being structured to retrieve airport glide path information from a database of stored airport glide path information as a function of the position signal, ~~compare the position and altitude signals with a glide path,~~ and output a signal representative of a degree of coincidence with the glide path as a function of comparing the position and altitude signals with the glide path information; and
- 20 a an on-board display structured to receive the signal output by the signal generator and responsively output a visual indication of the degree of coincidence with the glide path.

Claim 9 (cancelled)

Claim 10 (cancelled)

Claim 11 (cancelled)

- 25 Claim 12 (previously presented): The generator of claim 8 wherein the illuminated indicators are positioned on the display to appear in positions consistent with ground-based airport lighting aids as seen on approach.

Claim 13 (cancelled)

5 Claim 14 (original): A glide path deviation generator, comprising:

a memory having a stored database of airport information accessible as a function of position, the airport information including runway location, elevation and direction information;

a processor coupled to receive position and elevation data and coupled to the memory for retrieving the airport information as a function of the position, the processor being structured to  
10 operate a computer program for generating a glide path, comparing the position and elevation data to the glide path, and generating a signal representative of deviation of the position and elevation data from the glide path; and

a cockpit display being coupled to receive the deviation signal and being structured to display a pattern of color coded indicators as a function of the deviation signal.

15 Claim 15 (original): The generator of claim 14 wherein operating a computer program for generating a glide path further comprises operating the computer program as a function of the airport information to compute a glide path.

Claim 16 (original): The generator of claim 14 wherein operating a computer program further comprises operating the computer program repeatedly for comparing updated position and  
20 elevation data to the glide path, and generating a signal representative of deviation of the updated position and elevation data from the glide path.

Claim 17 (original): The generator of claim 14 wherein the pattern of indicators further comprises a pattern of indicators that substantially simulates an airport lighting aid.

Claim 18 (cancelled)

25 Claim 19 (previously presented): The generator of claim 17 wherein the airport lighting aid substantially simulated by the pattern of indicators further comprises a simulated Visual Approach Slope Indicator having a pointer portion that is programmed to simulate a vertical deviation scale.

Claim 20 (original): A computer program product for indicating deviation from a glide path, wherein the computer program product comprises:

30 a computer-readable storage medium;

5           and computer-readable program code means embodied in the medium, the computer-readable program code means comprising:

          first computer-readable program code means for determining a global position from a received plurality of navigation data,

          second computer-readable program code means for determining an altitude above  
10       ground level from one or more received navigation datum,

          third computer-readable program code means for retrieving a plurality of airport information from a database of airport information as a function of the position determined from the first computer-readable program code means,

          fourth computer-readable program code means for determining correspondence  
15       between the position determined from the first computer-readable program code means combined with the altitude determined from the second computer-readable program code means and a glide path determined as a function of the airport information determined from the first computer-readable program code means, and

          fifth computer-readable program code means for outputting a signal as a function  
20       of the correspondence determined from the fourth computer-readable program code means.

Claim 21 (original): The computer program product of claim 20 wherein the fourth computer-readable program code means for determining correspondence between the position combined with the altitude and the glide path further comprises means for computing the glide path as a  
25       function of the airport information.

Claim 22 (original): The computer program product of claim 20 wherein the fourth computer-readable program code means for determining correspondence of the position and altitude with the glide path further comprises computer-readable program code means for retrieving the glide path as one of the plurality of airport information retrieved from the database of airport  
30       information.

- 5     Claim 23 (original): The computer program product of claim 20, further comprising sixth computer-readable program code means for interpreting the signal output by the fifth computer-readable program code means as a pattern of color coded indicators on a cockpit display.

Claim 24 (original): The computer program product of claim 23 wherein the pattern of display indicators simulates a known airport lighting aid.

- 10    Claim 25 (original): The computer program product of claim 24 wherein the simulated airport lighting aid further comprises a substantially conformal presentation.

Claim 26 (cancelled)

- Claim 27 (original): The computer program product of claim 24, further comprising a seventh computer-readable program code means for interpreting the signal output by the fifth computer-readable program code means as a pointer indicator for simulating a vertical deviation scale on the cockpit display.

Claim 28 (currently amended): A method for using an electronic circuit to compare a signal conveying navigation data with a predetermined glide path, the method comprising:

- receiving a plurality of navigation signals;  
20     retrieving airport information from a database as a function of one or more of the navigation signals;  
determining deviation from a glide path as a function of one or more of comparing the navigation signals and one or more of the airport information;  
and outputting a signal representative of the deviation from the glide path.

- 25    Claim 29 (original): The method of claim 28, further comprising visually displaying the deviation from the glide path as a function of the deviation signal.

- Claim 30 (previously presented): The method of claim 29 wherein displaying the deviation further comprises displaying an airport image as a function of the airport information retrieved from the database; and displaying the deviation as a substantially conformal presentation relative to the airport image.

- 5 Claim 31 (original): The method of claim 29 wherein displaying the deviation further comprises displaying color coded information as to a degree of deviation.

Claim 32 (original): The method of claim 28 wherein determining the deviation from a glide path further comprises computing the glide path as a function of one or more of the airport information.

- 10 Claim 33 (original): The method of claim 28 wherein determining the deviation from a glide path further comprises retrieving the glide path from the database.

Claim 34 (original): The method of claim 28, further comprising updating the deviation over time.

- 15 Claim 35 (original): The method of claim 34 wherein updating the deviation over time further comprises repeating the determining of the deviation from the glide path at predetermined intervals.

Claim 36 (previously presented): The method of claim 31 wherein displaying color coded information as to a degree of deviation further comprises displaying an illuminated indicator indicating the degree of deviation from the glide path positioned relative to a pattern of illuminated indicators simulating a known airport lighting aid.

- 20 Claim 37 (previously presented): The generator of claim 8 wherein the display further comprises:  
a pattern of illuminated indicators simulating a known airport lighting aid, and  
an illuminated degree of deviation indicator indicating a degree of deviation from coincidence with the glide path, the illuminated degree of deviation indicator being positioned relative to the pattern of illuminated indicators simulating a known airport lighting aid.

- 25 Claim 38 (cancelled)

Claim 39 (previously presented): The generator of claim 8 wherein the signal generator is further structured to output signals representative of a lateral deviation scale relative to the runway; and  
the display is further structured to responsively output a visual indication of the lateral deviation scale.

- 5 Claim 40 (previously presented): The generator of claim 8 wherein the signal generator is further structured to output signals representative of horizontal and longitudinal perspective line segments in positions relative to ground as a function of the airport information and the position and altitude of the host aircraft; and

10 the display is further structured to responsively output a visual indication of the horizontal and longitudinal perspective line segments in positions constructed to appear conformal to a flat surface on the ground.

Claim 41 (previously presented): The generator of claim 8 wherein the signal generator is further structured to output signals representative of a path to a current waypoint and a next waypoint; and

15 the display is further structured to responsively output a visual indication of the path to the current and next waypoints.

Claim 42 (new): The generator of claim 1 wherein the means for determining deviation from the glide path further comprises a means for determining deviation from the glide path as a function of comparing the position and altitude information with the glide path exclusive of an Instrument  
20 Landing System (ILS) signal.

Claim 43 (new): The generator of claim 8 wherein the navigation signals are further exclusive of an Instrument Landing System (ILS) signal.